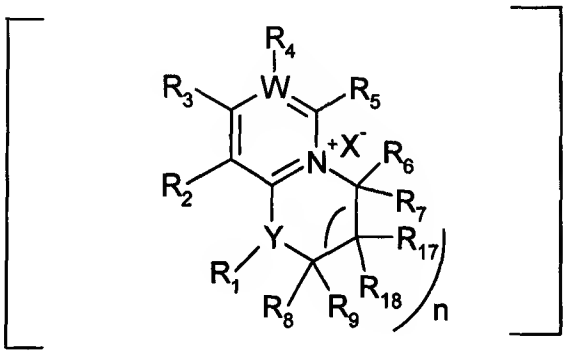
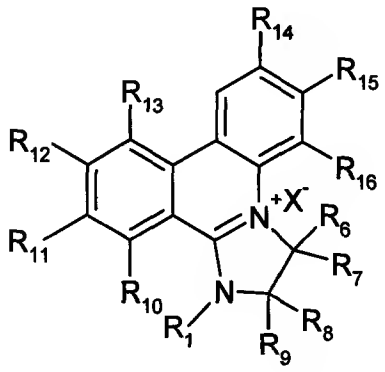
Amendment to the Claims – U.S. Patent Application No. 10/580,898

1. (Currently Amended) A compound represented by ~~Formula A~~the formula:





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wherein:

~~n = 0, 1, 2 or 3 such that:~~

~~when n = 0, the substituents R_{17} and R_{18} and the carbon atom to which they are bonded are not present; and~~

~~when n is 1, 2 or 3, the substituents R_{17} and R_{18} present on the respective carbon atom(s) may be the same or different and are independently selected from hydrogen or a substituent;~~

~~W is C or N, such that when W is N, R_4 is a lone pair of electrons;~~

~~Y is selected from N, O or S, such that:~~

~~when Y is O or S, R_1 is a lone pair of electrons; or~~

~~when Y is N,~~ R_1 is selected from hydrogen, unsubstituted or substituted C_{1-7}alkyl, unsubstituted or substituted C_{1-7}cycloalkyl, unsubstituted or substituted C_{1-7}cycloalkyl-C_{1-7}alkyl, unsubstituted or substituted C_{5-20}aryl, unsubstituted or substituted C_{5-20}aryl-C_{1-7}alkyl, unsubstituted or substituted C_{3-20}heterocyclyl, or a linking group to form a multimeric compound in which a plurality of compounds represented by ~~Formula A~~ said formula are covalently bonded together;

~~independently R_2 and R_3 and/or R_4 and R_5 together can form an aromatic carbon or heterocyclic ring structure, optionally substituted with one or more aromatic substituents, or R_2, R_3, R_4 and R_5 are independently selected from an aromatic substituent;~~

R_6 and R_7 are independently selected from hydrogen or independently or together can be a substituent;

R_8 and R_9 are independently selected from hydrogen or independently or together can be a substituent;

~~wherein when R_{17} and R_{18} are present, they are independently selected from hydrogen or independently or together can be a substituent;~~ and

one of the substituents R_6 and R_7 which is present on the carbon atom at the alpha position to the aromatic ring may form a double bond with one of the substituents R_8 and R_9 ~~or R_{17} and R_{18}~~ which is present on the carbon atom at the beta position to the aromatic ring; and

X^- is an anionic moiety;

and wherein:

~~the~~ said R_6, R_7, R_8 and R_9 substituent or substituents are independently selected from halo, hydroxy, oxo, ether, formyl, C_{1-7}alkylacyl, C_{5-20}arylacyl, acylhalide, carboxy, ester, acyloxy, amido, acylamido, thioamido, tetrazolyl, amino, nitro, nitroso, azido, cyano, isocyano, cyanato, isocyanato, thiocyano, isothiocyano, sulfhydryl, thioether, sulfonic acid, sulfonate, sulfone, sulfonyloxy, sulfinyloxy, sulfamino, sulfonamino, sulfinamino, sulfamyl,

sulfonamido, C_{1-7}alkyl, C_{1-7}haloalkyl, C_{1-7}hydroxyalkyl, C_{1-7}carboxyalkyl, C_{1-7}aminoalkyl, C_{5-20}aryl-C_{1-7}alkyl, C_{3-20}heterocyclyl, or C_{5-20}aryl; and

~~the aromatic substituent or substituents are~~ R_{10}, R_{11}, R_{12}, R_{13}, R_{14} and R_{15} are independently selected from hydrogen, -F, -Cl, -Br, -I, -OH, -OMe, -OEt, -SH, -SMe, -SEt, -C(=O)Me, -C(=O)OH, -C(=O)OMe, $-CONH_2$, -CONHMe, $-NH_2$, $-NMe_2$, $-NEt_2$, $-N(nPr)_2$, $-N(iPr)_2$, -CN, $-NO_2$, -Me, -Et, $-CF_3$, $-OCF_3$, $-CH_2OH$, $-CH_2CH_2OH$, $-CH_2NH_2$, $-CH_2CH_2NH_2$, -Ph, ether, ester, amido, amino, C_{1-7}alkyl, C_{1-7}haloalkyl, C_{1-7}hydroxyalkyl, C_{1-7}carboxyalkyl, C_{1-7}aminoalkyl, or C_{5-20}aryl-C_{1-7}alkyl.

2.-3. (Cancelled)

4. (Previously Presented) The compound according to claim 1, wherein R_1 is a substituted C_{1-7}alkyl group selected from substituted C_{1-7}alkyl, C_{1-7}haloalkyl, C_{1-7}hydroxyalkyl, C_{1-7}carboxyalkyl, or C_{1-7}aminoalkyl.

5. (Previously Presented) The compound according to claim 1, wherein R_1 is a selected from C_{5-20}aryl, C_{5-20}carboaryl, C_{5-20}heteroaryl, C_{1-7}alkyl-C_{5-20}aryl or C_{5-20}haloaryl, optionally substituted with one or more substituents.

6. (Previously Presented) The compounds according to claim 1 which is:
1-(4-Methoxy-benzyl)-2,3-dihydro-1*H*-imidazo[1,2-*f*]phenanthridinium bromide;
1-(2-Hydroxy-ethyl)-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;
2,3-Dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;
1-Isopropyl-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;
1-Cyclopropyl-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;
1-(4-Methoxy-phenyl)-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;
1-Phenyl-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;
1-paramethoxyaniline-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;

1-Methoxycarbonylmethyl-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;

1-(1-Methoxycarbonyl-2-phenyl-ethyl)-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;

1-Benzyl-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;

1-(2-Mercapto-ethyl)-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;

3-(4-Methoxy-benzyl)-2,3-dihydro-1H-imidazo[1,2-a]quinolin-10-ylium bromide;

1-(4-Methoxy-benzyl)-2,3-dihydro-1H-imidazo[2,1-a]isoquinolin-4-ylium bromide;

1-(4-Methoxy-benzyl)-2,3-dihydro-1H-imidazo[1,2-a]pyridin-4-ylium bromide; 1-Propyl-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;

1-(2-Hydroxy-1-methyl-ethyl)-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;

1-[1-(4-Methoxy-phenyl)-ethyl]-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;

7-Bromo-1-(4-methoxy-benzyl)-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;

1-(4-Ethyl-phenyl)-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;

1-Hexyl-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;

1-Dodecyl-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;

1-Octadecyl-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide;

1-(3,3-Diphenyl-propyl)-2,3-dihydro-1H-imidazo[1,2-f]phenanthridin-4-ylium bromide; or

1-(4-Methoxy-benzyl)-2,3-dihydro-1H-imidazo[1,2-c]quinazolin-4-ylium bromide.

7.-11. (Cancelled)

12. (Previously Presented) The compound according to claim 1, wherein X^- the anionic moiety is selected from halogen, tosylate or mesylate.

13. (Cancelled)

14. (Currently Amended) The compound according to claim 1, wherein the compounds of said formula forming the multimeric compound are covalently bonded together via their respective R_1 substituents or via a spacer group.

15. (Currently Amended) A multimeric compound formed by covalently linking two or more of the same or different compounds of said formula according to claim 1.

16. (Currently Amended) The multimeric compound according to claim 15, wherein compounds of ~~Formula A~~ said formula are linked via the R_1 substituent.

17. (Canceled)

18. (Currently amended) The multimeric compound according to claim 15, wherein ~~the~~ compounds of said formula are covalently bonded via a linker group or linker groups.

19. (Currently amended) The multimeric compound according to claim 18, wherein the linker groups is a C_{1-7} alk-di-yl group bonded to another group of ~~Formula A~~ said formula in place of R_1 thereof; a piperazin-di-yl group bonded to another group of ~~Formula A~~ said formula in place of R_1 thereof; a (N,N-C_{1-6} dialkylene) C_{1-7} alkylene amine bonded to two other groups of ~~Formula A~~ said formula in place of R_1 thereof~~; or a cyclo (C_{4-8}) alk-tri-yl group bonded to two other groups of Formula A in place of R_3 thereof~~.

20. (Previously Presented) The multimeric compound according to claim 15, wherein the multimeric compound is a dimer, trimer or tetramer.

21. (Currently Amended) The multimeric compound according to claim 15, wherein the compounds of ~~Formula A~~ said formula are covalently bonded to a spacer group.

22. (Currently amended) The multimeric compound according to claim 19 in which 2 or more~~, 3 or more, 4 or more, 5 or more, 10 or more, 20 or more, 50 or more, or 100 or more~~ compounds represented by ~~Formula A~~ said formula are covalently linked via one or more spacer groups.

23. (Currently amended) The multimeric compound according to claim 19, wherein the spacer group is a polyamine compound comprising an alkyl chain having a plurality of amine groups for reacting with the compounds of ~~Formula A~~ said formula.

24. (Cancelled)

25. (Currently Amended) A composition comprising one or more compounds according to claim 1 and a pharmaceutically acceptable carrier.

26.-27. (Canceled)

28. (Currently amended) A method for the treatment of ~~a condition treatable by an anti-cancer agent, an anti-inflammatory agent, an antiprotozoal agent,~~ ovarian cancer, said method comprising administering to a patient in need of said treatment a therapeutically effective amount of a compound as claimed in claim 1.

29.-31. (Cancelled)

32. (Original) A method of synthesising a heterocyclic aromatic cationic compound with an additional ring, the method comprising reacting a heterocyclic aromatic cationic compound comprising a ring nitrogen and at least one alpha hydrogen atom with a substituted or unsubstituted primary amine, a sulphate or a hydroxide, wherein the primary amine, sulphate or hydroxide reacts with the heterocylic aromatic compound by alpha addition, cyclisation and an oxidation step thereby providing the heterocyclic aromatic compound with an additional ring.

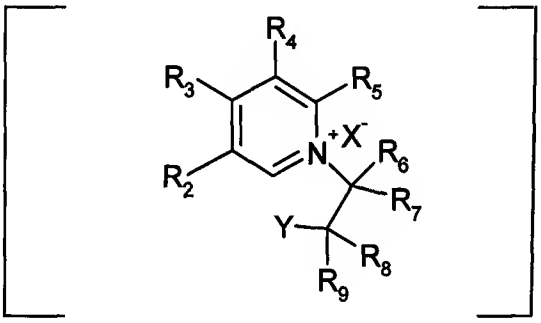
33. (Previously Presented) The method according to claim 32, wherein the additional ring is a five membered ring.

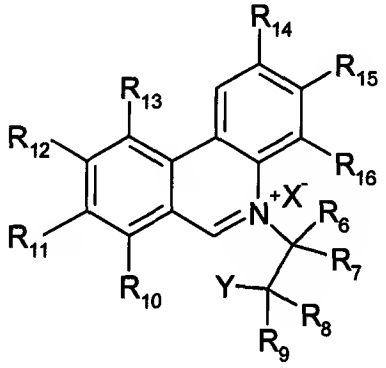
34. (Previously Presented) The method according to 32, wherein the reaction is a one pot reaction.

35. (Cancelled)

36. (Currently amended) The method according to claim 32, wherein the method is for making a compound represented by ~~Formula Ai or Aii as defined in claim 2 or claim 3~~ the formula of claim 1 and comprises:

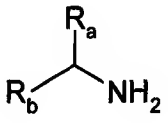
reacting a heterocyclic aromatic compound of the formula ~~represented by the Formula Ai' or Aii' respectively~~:





wherein Y is a leaving group and the remaining substituents are as defined in claim 1 ~~2 or claim 3~~;

with a primary amine represented by the formula:



wherein the R_a-C-R_b substituents of the primary amine forms the group R_1 in the final compound;

the primary amine reacting with ~~the phenanthridinium compounds of Formula Ai'~~ said heterocyclic aromatic compound by addition, cyclisation and oxidation to produce a compound represented by ~~Formula Ai~~ said formula of claim 1.

37. (Currently amended) The method according to claim 32, wherein the method uses a primary amine which (1) has no substituents in the alpha position, or (2) has a primary carbon in the alpha position, or (3) has a secondary carbon in the alpha position~~)~~, or (4) has a tertiary carbon in the alpha position, or (5) is or derives from an amino acid.

38. (Currently amended) The method according to claim 32, wherein the primary amine is an aromatic amines~~, such as naphthalen-1-ylamine or anthracen-9-ylamine~~.

39.-41. (Cancelled)

42. (Previously Presented) The method according to claim 32, further comprising the step of forming a multimeric compound.

43. (New) The multimeric compound according to claim 15, wherein the compound is a dimer selected from the group of an ethylene diamine derivative with two groups of said formula; dihydro-imidazo-phenanthidinium (DIP) dimer derived from the spacer N1-(2-Amino-ethyl)-ethane-1,2-diamine; DIP dimer derived from the spacer 2-Amino-1-[4-(2-amino-acetyl)-piperazin-1-yl]-ethanone; DIP dimer derived from the spacer 2-[4-(2-Amino-ethyl)-piperazin-1-yl]-ethylamine; and phenanthridinium dimer derived from the spacer 2-[4-(2-Amino-ethyl)-piperazin-1-yl]-ethylamine.

44. (New) The multimeric compound according to claim 15, wherein the compound is a trimer selected from the group of tris (2-aminoethylamine) derivatives with three groups of said formula; cis-triaminocyclohexane derivatives with three groups of said formula; 2-Amino-1-[5,9-bis-(2-amino-acetyl)-1,5,9triaza-cyclododec-1-yl]-ethanone derivative with

three groups of said formula; 2-[5,9-Bis-(2-amino-ethyl)-1,5,9triaza-cyclododec-1-yl]-ethylamine derivative with three groups of said formula; dihydro-imidazo-phenanthidinium (DIP) trimer derived from the spacer 2-Amino-1-[5,9-bis-(2-amino-acetyl)-1,5,9triaza-cyclododec-1-yl]-ethanone; DIP trimer derived from the spacer Cyclohexane-1,3,5-triamine; and phenanthridinium trimer derived from the spacer 2-[5,9-Bis-(2-amino-ethyl)-1,5,9triaza-cyclododec-1-yl]-ethylamine.

45. (New) The multimeric compound according to claim 15, wherein the compound is a tetrakis-(6-amino-hexyl)-ammonium bromide derivative with four groups of said formula.

46. (New) The method according to claim 38, wherein said aromatic amine is naphthalene-1-ylamine or anthracin-9-ylamine.